TRANSPORTATION AND TRAFFIC PLANNING



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Introduction

Transport planning decides how a city moves for the next twenty years, and it does so with incomplete data, competing interests, and limited budgets. A plan that ignores land use, or prices a corridor without demand evidence, produces congestion the next plan must fix. This Transportation and Traffic Planning Training Course gives transport planners, traffic engineers, and municipal professionals a complete working method for that work. Participants learn survey and data collection, demand modelling, public transport planning, network and corridor planning, appraisal and funding, and implementation and monitoring.

Transportation and Traffic Planning Course Objectives

- Apply transport planning processes from problem definition to implementation.
- Design and manage traffic and travel surveys.
- Apply the four-step demand model: generation, distribution, mode choice, assignment.
- Apply land use and transport interaction principles to planning.
- Plan public transport networks, routes, and service frequencies.
- Plan road hierarchy, corridors, and network capacity.
- Apply parking policy and travel demand management measures.
- Apply cost-benefit analysis and multi-criteria appraisal to plans.
- Apply transport modelling tools and interpret their outputs.
- Measure performance with journey time, mode share, and accessibility indicators.

Course Methodology

- Facilitated sessions built on real survey data, network plans, and appraisal reports.
- Case workshops on congestion growth, failed schemes, and mode shift programmes.
- Demand modelling, appraisal, and network calculation exercises with live data.
- Survey design and data analysis practice labs.

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- Group exercise on a transport plan for an area, with appraisal and priorities.

Who Should Take This Course

- Transport planners and policy analysts.
- Traffic engineers and municipal staff.
- Public transport planning staff.
- Urban and land use planners.
- Development and infrastructure consultants.
- Funding agency and appraisal officers.

Transportation and Traffic Planning Course Outlines

Day 1: Planning Process and Data Collection

- Transport planning cycle: problem, objectives, options, appraisal, implementation.
- Policy context and stakeholder identification.
- Traffic count methods and survey design.
- Origin-destination survey techniques.
- Household travel survey design and sampling.
- Big data sources: mobile, GPS, and ticketing.
- Data quality, sampling error, and validation.

Day 2: Demand Analysis and Modelling

- Travel demand factors: land use, income, and cost.
- Trip generation, distribution, mode choice, and assignment.
- Trip attraction and production modelling.

- Gravity models and distribution analysis.
- Mode choice and modal split modelling.
- Assignment methods and route choice behaviour.
- Model validation, calibration, and limitations.

Day 3: Public Transport and Network Planning

- Public transport network hierarchy and route design.
- Service frequency, headway, and capacity planning.
- Interchange and multimodal integration.
- Bus priority measures and dedicated lanes.
- Fare policy, subsidy, and contract structures.
- Accessibility and first and last mile solutions.
- Public transport service quality standards.

Day 4: Road Network, Parking, and Demand Management

- Road hierarchy and classification principles.
- Corridor planning and network capacity assessment.
- Junction and link capacity implications.
- Parking policy, supply, and pricing strategies.
- Congestion pricing and road user charging basics.
- Travel demand management: incentives and restrictions.
- Land use planning and development control links.

Day 5: Appraisal, Implementation, and Monitoring

- Cost-benefit analysis: costs, benefits, and discounting.
- Multi-criteria appraisal for non-monetised impacts.
- Value of time, accident savings, and emissions valuation.
- Funding options and business case preparation.
- Implementation phasing and risk management.
- KPIs: journey time, mode share, and accessibility indicators.
- Building a transport planning monitoring and review routine.

Conclusion

By successfully completing the Transportation and Traffic Planning Training Course, participants will have acquired a thorough working knowledge of transport planning processes, survey design and data collection, demand modelling, public transport and network planning, parking and demand management, and appraisal and monitoring. They will leave able to build a plan on measured demand, appraise options with recognised methods, and monitor whether the plan delivers the mobility it promised. Gentex Training Center delivers this programme with transport planning practitioners working on live networks.

FAQs for the Transportation and Traffic Planning course

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Q1 What is the "Transportation and Traffic Planning" course about?

It is a five-day programme on planning how people and goods move across an area over time. It covers planning process and data collection, demand modelling, public transport and network planning, parking and demand management, and appraisal and monitoring.

Q2 What are the key benefits of the "Transportation and Traffic Planning" course?

Participants build plans on measured demand rather than assumption, appraise options with recognised methods that funding bodies accept, and connect land use decisions to transport consequences. They also monitor whether delivered schemes achieve the mobility they promised.

Q3 What skills will I gain from the "Transportation and Traffic Planning" course?

You will gain transport planning process and survey management, travel demand modelling and analysis, public transport and road network planning, and appraisal, implementation, and monitoring management.

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Q4 What tools, methods, or standards are covered in the "Transportation and Traffic Planning" course?

The course works with the transport planning cycle covering problem, objectives, options, appraisal and implementation, stakeholder identification, traffic count methods and survey design, origin-destination survey techniques, household travel survey sampling, big data sources including mobile, GPS and ticketing, data quality and validation, trip generation, distribution, mode choice and assignment modelling, gravity models, modal split analysis, assignment methods and route choice behaviour, model calibration and validation, public transport network hierarchy and route design, service frequency, headway and capacity planning, interchange and multimodal integration, bus priority and dedicated lanes, fare policy, subsidy and contract structures, accessibility and first and last mile solutions, road hierarchy and classification, corridor planning and network capacity assessment, junction and link capacity analysis, parking policy, supply and pricing strategies, congestion pricing and road user charging, travel demand management measures, land use planning and development control links, cost-benefit analysis with discounting, multi-criteria appraisal, value of time, accident and emissions valuation, funding options and business case preparation, implementation phasing and risk management, and KPIs covering journey time, mode share and accessibility.

Q5 How is the "Transportation and Traffic Planning" course applied in real-world practice?

Teams apply it when designing a household travel survey, calibrating a demand model for a new corridor, planning bus route changes with frequency and capacity checks, appraising a congestion charge for funding approval, assessing the transport impact of a land use plan, and reporting mode share and journey time at an annual network review.