

LECTURE 3

Transportation Infrastructure Delivery and Decision Making

Introduction

Transportation system infrastructure and services are usually developed and managed by multiple (mostly public-sector) entities

These entities operate under a **governance framework** specific to their nation or region. Decision making occurs within this context.

While approaches to transportation decision making vary, they generally aim to **achieve** certain **higher-level goals or objectives**

Transportation Infrastructure — Terminology

Road

A road is a thoroughfare, route, or way on land between two places that has been paved or otherwise improved to allow travel by foot or by some form of conveyance. Roads consist of one or two roadways, each with one or more lanes and any associated sidewalks and road verges.

Railway

Rail transport is a means of transferring passengers and goods on wheeled vehicles running on rails, which are located on tracks.

Walkway

A walkway is a passage or path for walking along, especially a raised passageway connecting different sections of a building or a wide path in a park or garden.

Tunnel

A tunnel is an underground passageway, dug through the surrounding soil/earth/rock and enclosed except for the entrance and exit, commonly at each end.

Transportation Infrastructure — Terminology

(continued)

Station

A station is a regular stopping place on a public transportation route, especially one on a railroad line with a platform and often one or more buildings.

Airport

An airport is an aerodrome with extended facilities, mostly for commercial air transport.

Airway

An airway or air route is a defined corridor that connects one specified location to another at a specified altitude, along which an aircraft that meets the requirements of the airway may be flown high.

Waterway

A waterway is any navigable body of water.

Transportation Infrastructure — Terminology

(continued)

Port

A port is a maritime facility that may comprise one or more wharves where ships may dock to load and discharge passengers and cargo.

Cycling Infrastructure

Infrastructure for bicycles includes bicycle highways, bike paths, and bike lanes.

Last Mile

The last mile is the cost and design challenges of reaching homes and businesses with physical infrastructure, services, and transportation.

Right of Way

A right of way is a right to make a way over a piece of land, usually to and from another piece of land.

Transportation Agency Roles and Responsibilities

In the United States, several agencies are responsible for transportation at the federal, state, regional, and local levels

Funding

for most transportation capital investment projects is from federal sources

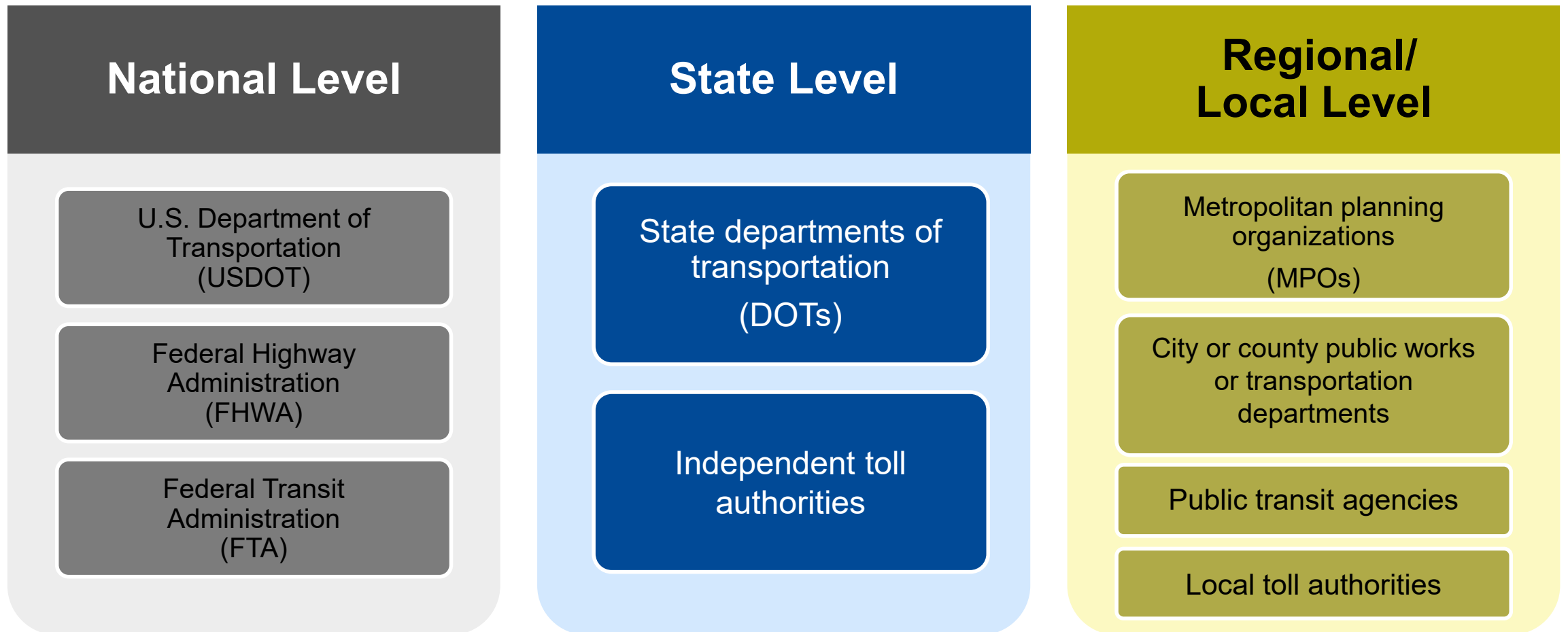
Planning

is conducted at the state and regional/local level following applicable federal regulations and guidance

Decision making

occurs at the local level to reflect needs and priorities of communities and stakeholders

Transportation Agencies



Transportation Agencies — National Level



U.S. Department of Transportation

The U.S. Department of Transportation (USDOT) is a cabinet-level agency of the federal government responsible for helping maintain and develop the nation's transportation systems and infrastructure. From roads to airlines to railways, USDOT carries out planning that supports the movement of Americans by cars, truck, trains, ships, and planes.



U.S. Department of Transportation
Federal Highway Administration

Federal Highway Administration

The Federal Highway Administration (FHWA) helps maintain the nation's system of interstate highways and provides enormous support in the form of funding. The agency also establishes rules for building safe roads, overpasses, and bridges that governments and contractors must follow.

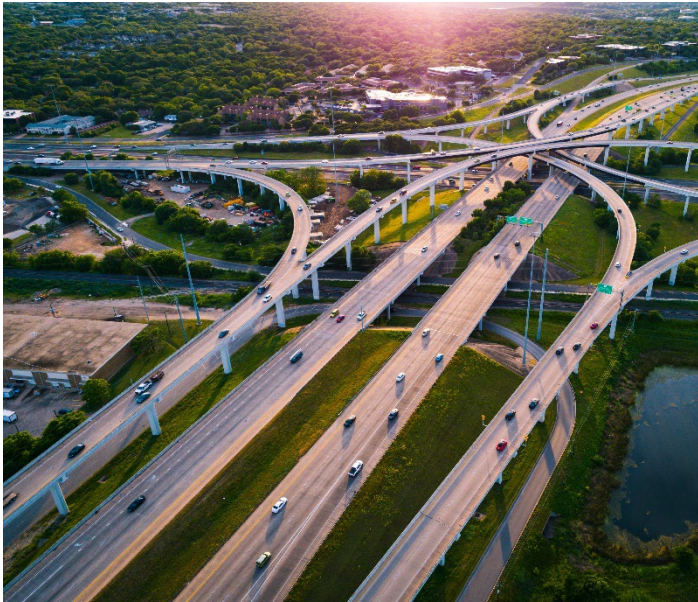


Federal Transit Administration

Federal Transit Administration

The Federal Transit Administration (FTA) funds mass transit systems across the country by distributing billions of dollars in grants to local and state governments and other organizations. FTA's goal is seeing new transit systems come online or to improve existing mass transit operations. The agency is also responsible for ensuring that recipients of grants follow federal mandates along with statutory and administrative requirements.

Transportation Agencies — State Level



State departments of transportation

The chief duties of the department are to delineate, build, and maintain all state highway and public transportation systems; issue permits for the use of heavy trucks; and register motor vehicles.

Transportation Agencies — Regional/Local Levels

Metropolitan planning organizations

A metropolitan planning organization (MPO) is the policy board of an organization created and designated to carry out the metropolitan transportation planning process. MPOs are required to represent localities in all urbanized areas with populations over 50,000, as determined by the U.S. Census.

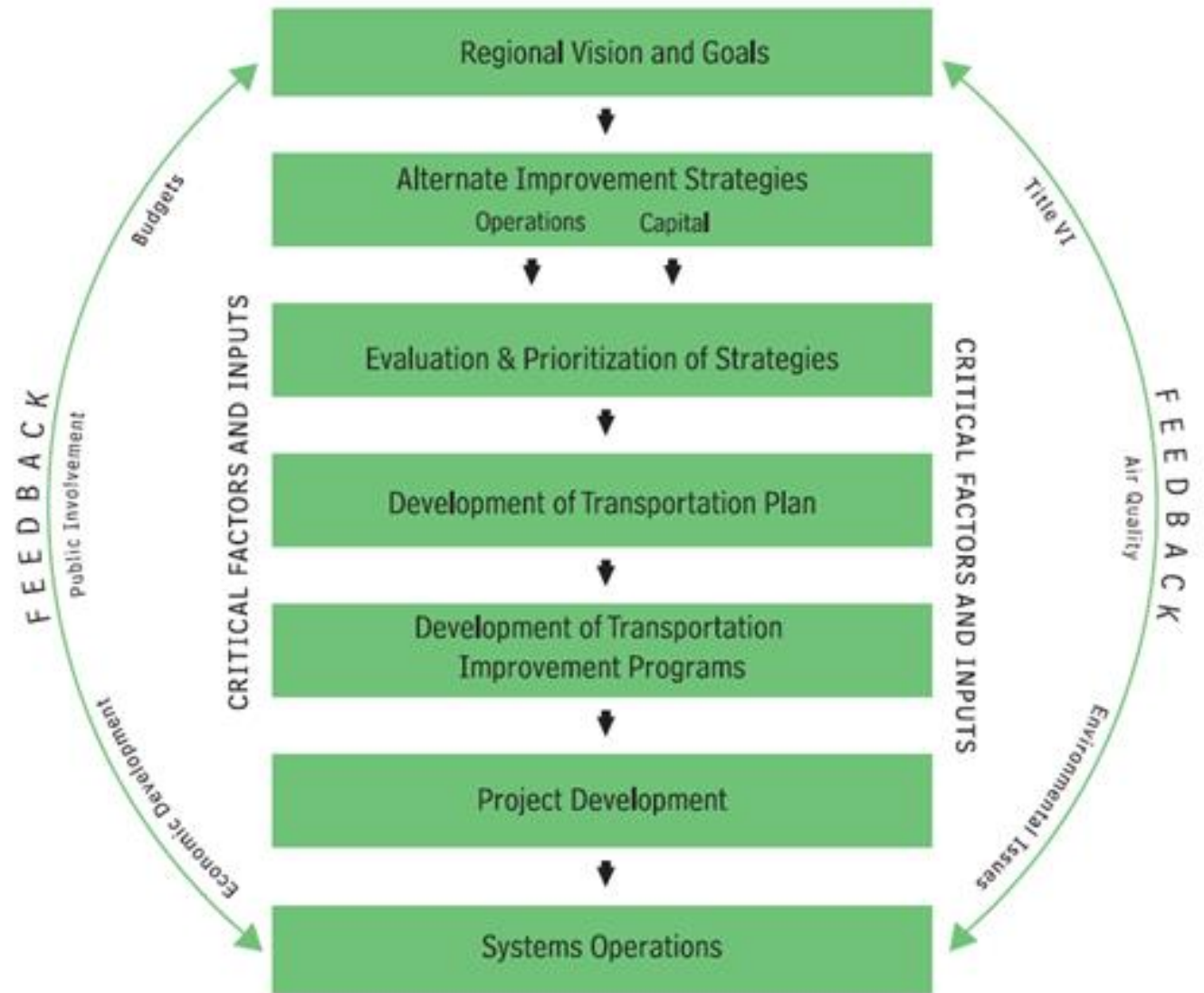
Public transit agencies

A transit district or transit authority is a government agency or a public-benefit corporation created for the purpose of providing public transportation within a specific region. A transit district may operate bus, rail, or other types of transport including ferry service, or may operate other facilities.

Transportation Planning and Delivery Process

Steps

1. Identify goals/problems to be solved
2. Identify options or solutions
3. Prioritize and select from options
4. Implement
5. Monitor/evaluate



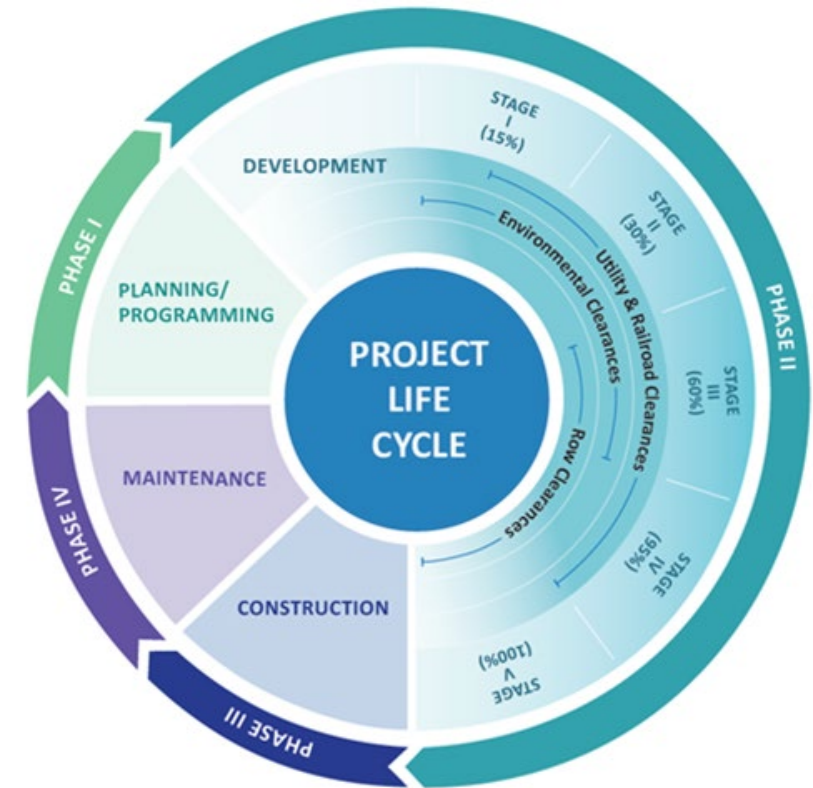
Source: *The Transportation Planning Briefing Book*. Federal Highway Administration.
https://www.fhwa.dot.gov/planning/publications/briefing_book/fhwahep18015.pdf

Transportation Planning and Delivery Process (continued)

Long-range transportation planning	Develop a vision for transportation investments
Short-range transportation planning	Use capital programming to match priority projects with funds
Project-level planning	Identify project needs, community concerns, and potential solutions
Project-level environmental review	Elaborate review to consider impact on environment, guided by regulations
Design, land acquisition, and permitting	Prepare engineering plans, purchase right of way, and obtain permits
Construction, maintenance, and operations	Build it and keep it working

Project Life Cycle

The project development process for construction projects is generally the most complicated part of the project life cycle



Source: Texas Department of Transportation. <https://www.txdot.gov/government/processes-procedures/lgp-toolkit/process.html>

Source: Arizona Department of Transportation. <https://azdot.gov/business/project-management-services/project-resource-office/project-dev-process-manual/project-dev-process-overview>

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