Choosing a funding strategy at this point in the planning process is critical, as it will drastically change the course for project implementation. Project sponsors should closely assess and weigh the long-term benefits of any funding strategy.

Local Funding Commitment

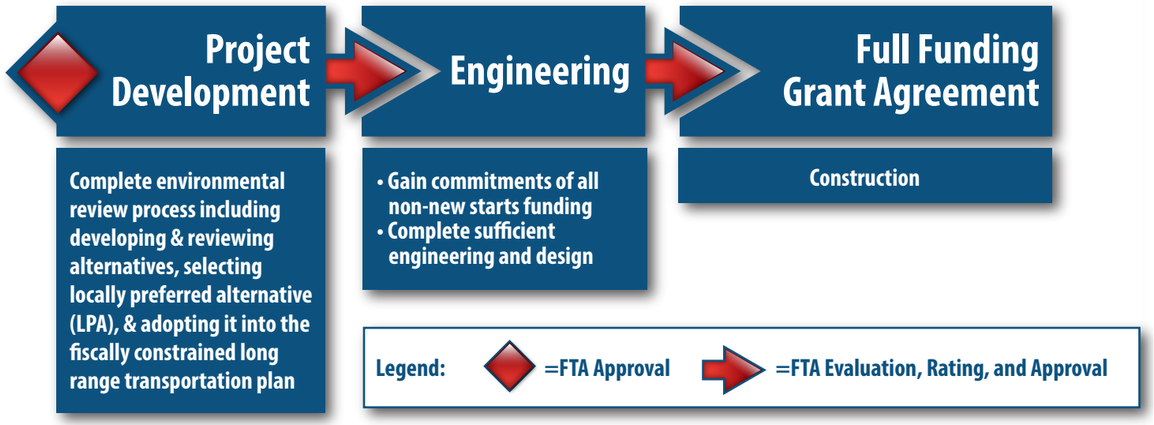
Securing a long-term source of local funds for the capital match and continued operation and maintenance of the transit system is one of the most challenging aspects in implementing a locally-driven fixed guideway project. As operations and maintenance are typically funded by local government sources, discussions regarding community referendums and sales tax measures will often begin during this stage of the planning process.

Agency Roles and Responsibilities

It is important to define the roles and responsibilities of each agency and stakeholder involved in ensuring the implementation of the project. A well-defined project management plan, identifying the overall project sponsor agency and the supporting agency roles and responsibilities, sets clear expectations during the life of the project and allows for a seamless transfer between project phases. In many cases, the FDOT or planning agency may conduct the concept and feasibility, project development, and environmental studies in cooperation with the transit agency and local governments. However, as the project advances into design and construction, the operating agency, whether it is the transit agency or authority or local government, will likely assume the role of project sponsor.

3 PROJECT DEVELOPMENT AND ENVIRONMENTAL STUDY

After the project has received approval to enter into the federal New Starts process or a public-private partnership has been forged, more detailed technical analyses are required to assess the actual costs and to document the mobility and economic benefits of the project. These studies should address the final alignment, technological specifications, operational needs, station locations and designs, land use, environmental and economic benefits, and provide detailed capital and operations costs. An environmental study is also conducted during this phase, along with an environmental class of action. Most importantly, the project development process should demonstrate local community support and a strong financial commitment. The culmination of this phase results in a locally preferred alternative that is adopted by the region's municipal policy boards. The project sponsor can then request entry into the FTA's engineering phase of the New Starts process. At the conclusion of engineering, negotiations may commence with FTA on a full funding grant agreement for New Starts, or a project construction grant agreement for a Small Starts project.



Conceptualizing, developing and building a fixed guideway transit system is a long-term process. Successful projects are those that are based on sound planning principles, have strong leadership, community support, and a realistic funding plan.

A keen understanding of the process, decision points, and issues will assist communities in realizing their vision for a regional transit fixed guideway system.

#MAKING TRACKS

A Primer for Implementing Transit Fixed Guideway Projects

Demand for new fixed guideway projects is strong nationwide. As of April 2011, over 640 new fixed guideway projects across the country have been identified in various stages of planning[1]. More than 30% of these projects are located in areas where no fixed guideway currently exist. The task of steering these major transit projects from the beginning planning stages to a fully operational system can be lengthy, typically ranging from 8 to 12 years. Additionally, securing funding and navigating the way through various state and federal requirements, including community and private sector commitments, requires continued and constant support from community leaders and implementing agencies to see the project through to completion.

[1]Reconnecting America. (2011). Jumpstarting the Transit Space Race: 2011 – A Catalog and Analysis of Planned and Proposed Transit Projects in the US. Washington, DC.

The Florida Department of Transportation (FDOT) has developed this primer to assist local communities through the planning phase, which involves the **first three steps** in developing a major fixed guideway project.

STEPS IN DEVELOPING A MAJOR FIXED GUIDEWAY PROJECT

1 PLANNING AND COMMUNITY SUPPORT

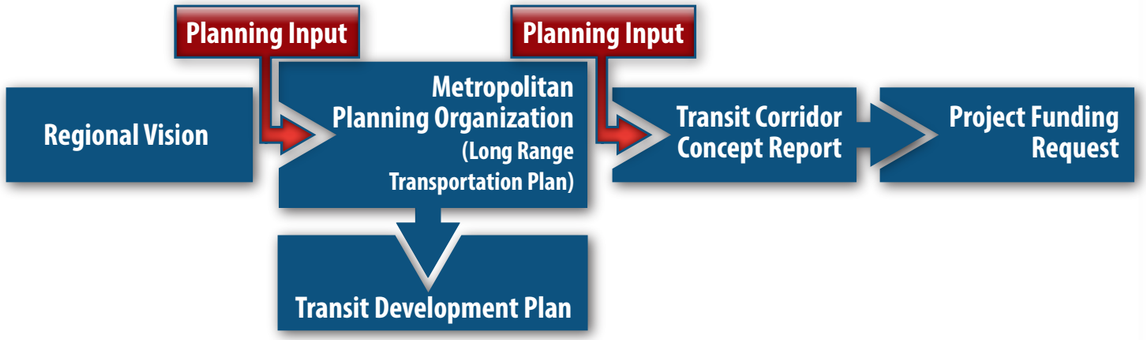
Creating a Vision

Fixed guideway transit systems are typically focused on a regional scale. Thus, regional transportation plans that identify commuter travel patterns are the first step in the planning process. These plans can illustrate the need for regional transit projects connecting high ridership and low income housing areas to employment centers and major destinations. The regional plans feed into the Metropolitan Planning Organization's Long Range Transportation Plans (LRTPs) which prioritize and solidify the transportation funding priorities in large urban areas. Once the regional plans are made consistent with the goals and objectives of the LRTP, the project can move forward to the next step.

Making the Connections

LRTP's define a purpose and need for large scale projects and garner support from the public in further pursuit of these projects. In some areas, it may be necessary for two or more MPOs to join forces, making a connection for a regional system, coordinating local resources and bridging funding gaps. Other local government and economic development agencies can be enlisted to assist in planning and promoting the project.

The local transit agency will be a key player in assessing the impacts of the project as part of the overall transit system, from including the project in their transit development plan to ultimately operating the major fixed guideway system. Strong local leadership is essential at all levels to foster public support and create momentum in ensuring the projects are implemented.



2 CONCEPT DEVELOPMENT AND FEASIBILITY ANALYSIS

Once the project concept receives initial approval in the regional and MPO planning processes, a more detailed corridor analysis is required. At this point, transportation strategies and alternatives are analyzed within the local land use framework and compared to determine the most appropriate solution for connecting regions, neighborhoods, or destinations. Stakeholders are engaged to make critical decisions such as alignments, transit technologies, right-of-way needs, connecting modes and routes, capital and operational needs, order of magnitude costs, implementation schedule, and how each scenario will be funded. Station locations and surrounding transit oriented land use plans should also be considered at this point to enhance the viability of the system. At its conclusion, a detailed corridor and feasibility study should provide enough information to program the next phase of the project and enough detail to determine whether to pursue public or private sector funding or a combination of both in building and funding the project.

Choosing a Technology

Selection of technology is based on the unique character and needs of the community, and is dependent on a variety of factors including size of service area, commute patterns, cost, available resources and the surrounding land uses. Types of rail fixed guideway technologies for consideration include cable car, commuter rail, heavy rail, hybrid rail, inclined plane, light rail, monorail, automated guideway, and streetcar rail. Bus Rapid Transit (BRT), which operates in exclusive rights-of-way, is also considered a fixed guideway project.

Commuter rail, heavy rail, and light rail technologies are often selected to address regional commuting needs that span several cities or large urban areas. These rail technologies typically connect a central city with outlying suburbs and communities.

- **Commuter rail** is a commonly selected technology due to its low capital cost per mile, as it operates on existing freight railways that may either be used exclusively or shared with other passenger and freight rail systems. Since most existing freight railways in Florida are privately owned, public-private partnerships may be a potential means of implementing commuter rail.

- **Heavy rail systems** are the most costly to build and operate, while light rail systems may have lower capacity and operating speeds, but can be less costly to develop. Both types of rail systems can generate significant economic activity and transit oriented land uses around station areas.

- **Streetcars** typically operate in downtown areas and along scenic tourist areas. They operate in shorter corridor lengths, provide frequent service and stops, and may encourage economic development such as transit oriented land use developments along their routes.

- **Automated People Movers (APMs)** are driverless, and are typically controlled by computers and operators in a control center. They may use electric energy sources, such as the one utilized by Japan's Tokyo Waterfront New Transit Waterfront Line. With higher capacity and operating speeds than streetcars, APMs can also provide a higher quality of service compared with traditional streetcar systems.

- **BRT** is the least expensive of the fixed guideway technologies due to the fact that it utilizes motor buses and can operate in both exclusive and mixed traffic lanes, requiring less expensive infrastructure.

Public or Private Funding

Large scale rail projects can typically run from $40 million per mile for light rail to $250 million per mile and greater for heavy rail, depending on the selected technology and infrastructure. Due to the significant capital costs, many communities choose to pursue federal funding through the Federal Transit Administration's (FTA) New Starts or Small Starts programs. The News Starts program is the federal government's primary financial resource for supporting locally-planned, implemented, and operated transit guideway capital investments.

New Starts projects are categorized as capital projects greater than $250 million, while the Small Starts projects have a total capital cost of less than $250 million and seek a federal share of less than $75 million. The maximum federal share for funding New Starts projects is 80% of the project cost, though 50% is a more common funding level. A local match is required for the remainder of the project cost.

To be eligible, project sponsors must request entry into the New Starts program. Once approval is received, all projects seeking funding from the program must be evaluated and rated based on project justification and local financial commitment criteria. This project development and evaluation process is a multi-year, multi-phased process that has a significant impact on the overall implementation schedule for the project. Florida has a State New Starts program for those projects that receive federal New Starts approval. It may potentially provide state funds to match up to 50% of the non-federal share of the capital cost of the project.

Another option for funding major fixed guideway systems is a public-private sector partnership where the private railroads own and/or operate the rail, as in the case of the planned All Aboard Florida rail project. In this scenario, the private rail company owns the tracks and will design, construct, and operate high speed rail with limited or no assistance from FDOT. These types of partnerships can be beneficial in that project timeframes can be compressed due to lack of federal financial requirements and commitments.