



A Comparative Analysis of High-Speed Rail Station Development into Destination and Multi-Use Facilities: The Case of San Jose Diridon

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MTI Project I502

February 2017

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As the scholarly literature and the experience on the ground indicate, good station-area planning is an important prerequisite for the successful operation of a high-speed rail (HSR) station; it can also trigger opportunities for economic development in the station area and station-city. What is less clear, however, is what constitutes good station-area planning. This study details the elements of good station-area planning for HSR stations, the challenges and opportunities for good station-area planning around the San Jose Diridon station, and the lessons learned from five case studies of successful European HSR stations.

Study Methods

The authors reviewed the literature on planning intermodal transit facilities, extracting recommendations about station and station-area design and land uses, operation of transportation services, and policy actions for station-area planning. They also undertook an evaluation of the Diridon station-area plans and other related planning documents detailing the evolution of goals, vision, and challenges for station-area development. They complemented the textual review with visits to Diridon station and interviews with planners and urban designers involved in its planning. To better understand and extract lessons from the European experiences with station-area development, the authors studied in detail the HSR stations in Lille, Lyon, Utrecht, Rotterdam, and Turin.

Findings

Drawing from these multiple information sources, the authors reached the following findings.

Successful HSR station-area planning is characterized by:

- Strong spatial connectivity, defined as the seamless integration of the station with its surroundings.
- Strong intermodal connectivity, defined as the seamless integration of different transportation modes at the station, and convenient access and transition from one mode to the other.
- Strong operational connectivity, defined as good project governance, coordination and collaboration among different public sector agencies and between the public and private sectors.

Policy Recommendations

To enhance spatial connectivity:

- Passenger flows should provide easy access to and between station platforms.
- Station entrances should be easily accessed by the surrounding street network.

**Good station-area planning
is critical to success.**

- Particular emphasis should be given to the station's pedestrian connections.
- Wayfinding strategies and good signage should help passengers navigate the station.
- Station design should provide outdoor and indoor communal spaces.
- Station design should aesthetically integrate the existing historic station but also expand its space and facilities. It should avoid creating a “good/front” and a “bad/back” building side.
- Architectural design should consider how to bring ample natural light to the station's interior.
- If an aerial configuration is chosen, the elevated structure should appear lighter.
- The station should have a good provision of retail, entertainment, and cultural services.
- The station should have ample provision of traveler services (ticketing and information booths, storage space, waiting spaces).
- In addition to the opportunity for mixed-use development and housing that can activate the station-area 24/7, it is important to plan for land uses that can accommodate office/commercial and entertainment activities and help concentrate jobs near the station.
- Parking facilities should be distributed to the surrounding neighborhoods. In particular, shared-use parking with the Mineta International airport and parking benefit districts in the surrounding neighborhoods should be considered.

To enhance intermodal connectivity:

- Shuttle connections to and from the airport
- Location of a bus terminal near the station
- Expansion of bicycle-share and bicycle parking facilities
- Utilization of the airport's car-rental services
- Seamless transfer of travelers' luggage from the airport to the station
- Integrated ticketing among the different transit operators
- Digital panels at the station with real-time information about rail services
- Modest-size kiss-and-ride lots

To enhance operational connectivity:

- Coordination of activities of the different agencies and stakeholders
- Development of a Joint Powers Authority to manage the station development project
- Consideration of different finance strategies for station-area improvements
- Encouragement of public-private partnerships and joint development projects
- Phased planning and development process that allows flexibility

About the Authors

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/project/1502.html

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