



## HIGH-SPEED RAIL INDUSTRY LEADERS GROUP

*How integrating high speed rail alignments with land use and urban design can deliver sustainable wider economic benefits.*

### The challenge

Transport can isolate and sever communities, and; produce negative outcomes for social inclusion. Railways and large station developments can cause severance of communities by lack of spatial integration of new stations within urban/semi-rural locations, owing to poor planning, remoteness of existing transport links and infrastructure that cause the 'wrong side of the tracks' phenomenon. The lack of active frontages on large developments may cause spatial severance, poor natural surveillance and reduced benefits, owing to crime, and lack of commercial or other revenue opportunities.

### The solution

Planning HSR stations well can ensure that they provide substantial benefits to their local communities rather than causing severance or other problems. Pre-planning and integrating land-use, transportation and urban design allows the development of new HSR stations that are catalysts for new urban development areas, linked to local roads, highways and regional rail. This approach requires comprehensive in depth planning of conurbations at the edge of existing cities to link new interchanges to existing towns and city centres with new metro/LRT/BRT. Advantages of the comprehensive planning approach adopted on the THSR included commercial benefits, transport benefits and redevelopment. The new train operator had an incentive to propose comprehensive redevelopment as 'Station Development' areas were provided as part of a 50 year BOT.

### How it worked

The design and construction of stations along the THSR route required coordination with stakeholders, and authorities responsible for all of the roads, highways and railways. Proposals required changes in land-use, coordination with urban planning authorities and municipalities. The interchanges were designed to integrate with other transport modes including buses, cars, taxis and cycles. Such coordination then continued during construction and operation stages. Architectural designs for these were developed and peer reviewed by a design review panel to ensure designs achieved the clients' vision. Generally there were few significant changes during construction; the proposals worked as designed. However, few TOD developments actually reached completion, owing to the prevailing financial and economic issues. Taiwan high-speed rail integrates new high speed rail alignments with land use and urban design to deliver sustainable wider economic benefits.

## Taiwan High-Speed Rail (THSR)

### The benefits

The stations form 'gateways' or 'urban lobbies' to the local communities where some stations became popular shopping/lunchtime destinations. Each station that forms part of a new development area also has a park of approximately 2 hectares that provides a community resource. Integrated planning allows park and ride stations to develop to minimise passenger journey time from door to door. Stations and viaducts have noise barriers to reduce environmental impacts. The architectural, urban and landscape design quality helped to integrate stations made a welcome contribution to the built environment.

