



International Insights and Their Consideration for California

Transit-Land Use Committee

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Three contrasting European systems were identified to provide the case study material

- Cases on High-Speed 1 stations in the UK anchor this work
- The four international stations in the system demonstrate a range of commercial approaches and performance
- The ownership structure and land acquisition narrative highlight the dynamic nature of system development and decision-making
- St Pancras Station commercial activity is the most valuable element of the HSI operation
- Other stations have not performed as intended



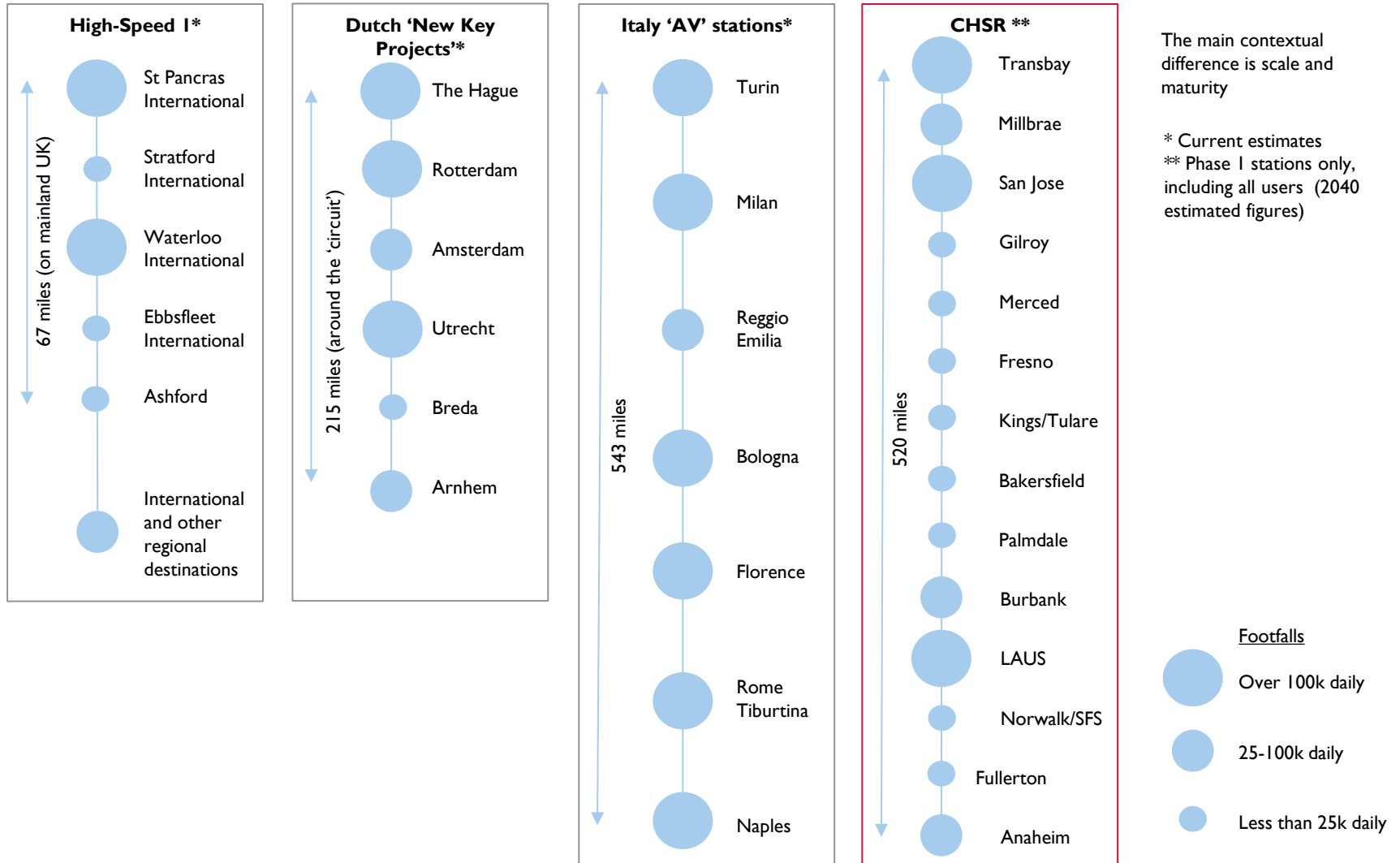
- Mini cases on the 'New Key Projects' stations in the Netherlands highlight the role of station redevelopment as a catalyst for urban renewal
- Land ownership has enabled development
- \$420m in 2016 revenue from commercial activities

- Mini cases on the 'Alta Velocità' system stations in Italy illustrate that certain station assets can be packaged into 'bankable' investments
- Retail element of station owner was spun off for \$1b for a 25 year concession

- Other mini cases from the UK add depth: Waterloo; Crossrail and the Northern Line extension to Battersea Power Station
- How lessons are being applied to High-Speed 2 is also considered

- Other case studies outside Europe were considered but the transferability of experience was considered even more limited and availability of insights more constrained.
- Role and powers of the HSR promoter, station locations, city population densities, use of rail vs car, strategic case, etc. are all factors where Asian experience is less transferable to Californian context.

We sought to understand context, benefits and methods in the cases and their application to California



The Authority's approach to the stations program (Nov 2016 TLU), is supported by experiences in the cases

Authority 2016 approach	Illustrated by case study
Engage private sector interested parties (Developers, Operator) early in the planning process	<ul style="list-style-type: none"> • Original HSI concession had significant land holdings to facilitate construction but then commercial development around stations • Those holdings, now transferred out of the concession, have all been developed with active participation of private sector developers
Build relationships, align local interests with high-speed rail enterprise interests	<ul style="list-style-type: none"> • Emilia-Romagna Region co-funding for a wider economic impact • Local funding to support operational/signaling changes to retain international services at Ashford • Arguably international connections at St Pancras facilitated European HQ of Google on the adjacent land
Ensure investment priorities are consistently applied across the system	<ul style="list-style-type: none"> • The Dutch 'modern cathedrals' to connect all types of travelers and citizens • In the UK the stations were sized for their demand but minimum expectations were met and common look/feel for HSI elements
Ensure development concepts and land assemblage reflects the characteristics of each location	<ul style="list-style-type: none"> • The developments between Kings Cross and St. Pancras and the land around Stratford have all relied on land not solely in the control of the railroads/HSR promoter
Ensure individual station investments are appropriately structured and scaled to the market	<ul style="list-style-type: none"> • Forecasting long-term market conditions with precision and accuracy is hard (see Ebbsfleet) • Stratford International services suspended leaving abandoned assets • Waterloo International's repurposing has taken considerable time and cost

We distilled insights into six themes that were evident in the cases

Insights from the cases

- ❑ Frequency and journey time provides utility
- ❑ Origin and Destination of services matters
- ❑ Price premium could impact
- ❑ Journey purpose influences station revenues
- ❑ Catchment and connectivity drives value
- ❑ Resilience of service/operational assumptions
- ❑ Physical orientation and integration of station can destroy potential value
- ❑ There are risks that a station's potential value becomes shared or ransomed
- ❑ There are operational considerations to stations to support a welcoming, secure, safe and performing railroad
- ❑ Evolution of the asset and offer to meet emerging market/need

6 strategic enabling themes

1. Optimized stations should perform across a range of commercial, operational and neighbor functions
2. Optimizing value from stations means matching the market potential to the system commercial approach
3. The benefits that arise from a station are both direct and indirect and these are likely to have different enablers
4. Securing access to appropriate and sufficient land is a key tactic to deliver strategy and protect benefits
5. Careful design is required to facilitate maintenance of optimization over time and changing contexts
6. Capability to partner and alliance with a variety of 3rd parties is important

Optimized stations need to perform across a range of functions and be constructed sympathetically

Rail System functions

- ▶ Although St. Pancras' commercial performance is perhaps 'best in class' it is operationally challenging,
- ▶ Bologna Centrale transfer times between modes are long and the sub-surface concourse has trading restrictions due to fire precautions

Economic functions

- ▶ The desire for economic development around Dutch stations provided catalyst for investment
- ▶ The region of Emilia-Romagna recognized the benefits of a development program leveraging the HSR system

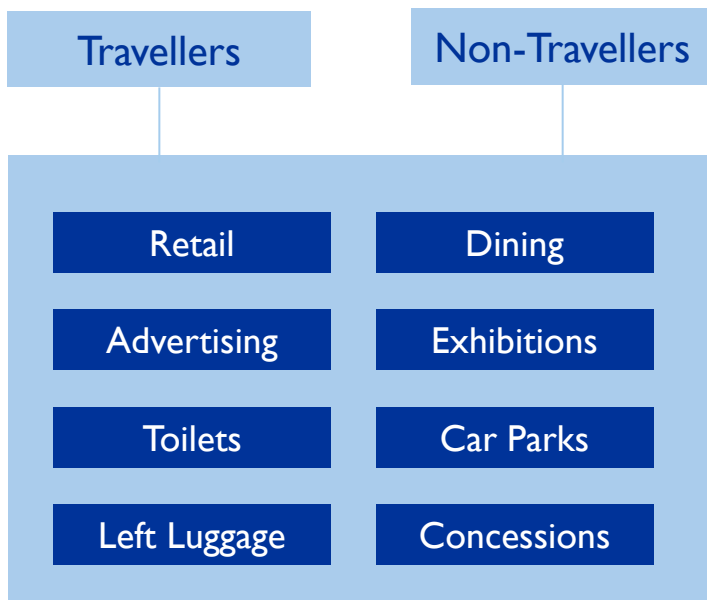
Social functions

- ▶ Rome Tiburtina reconnected separated districts of Rome
- ▶ Bologna Central AV station was delivered underneath the existing operational station

Enablers and Critical Success Factors

- ▶ Constructed without damaging existing railroad ridership, transportation network, e.g. Bologna Central AV delivered underneath the existing station
- ▶ Sufficient engagement, land and connectivity to facilitate end-state aspiration

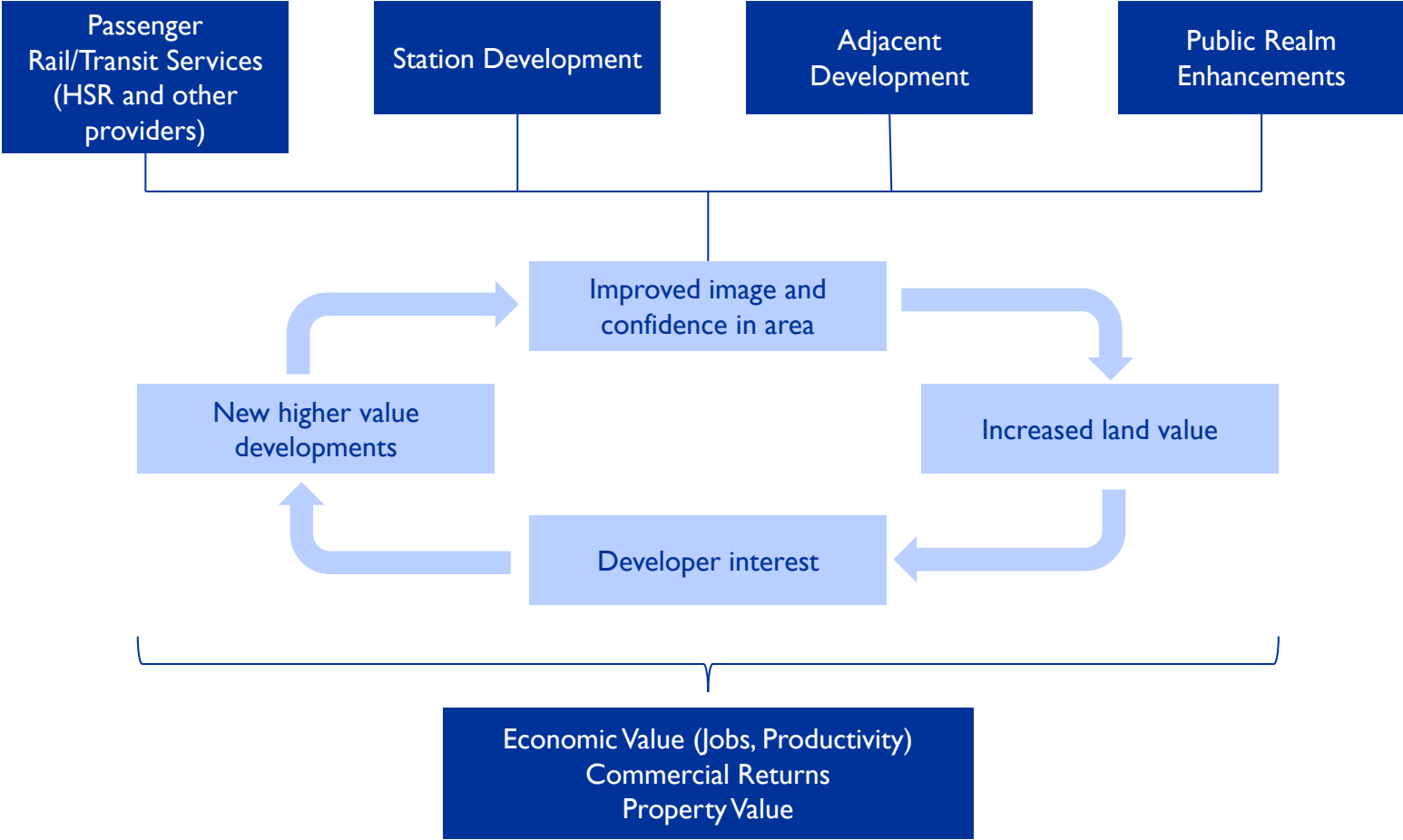
Station usage drives commercial benefits



Commercial returns will be maximised when footfall at the station is maximised.

1. Encouraging usage by non-travellers or non-HSR travellers through destination amenities
 - Understand existing local provision and gaps
 - Create role for station
 - Identify scale and participants of end-state
2. Reviewing the potential for revenue streams from ancillary station services
 - Consider impacts and integration with HSR service offer and pricing
3. Integrating the station (and its immediate district) at an early stage to facilitate usage – this could be before HSR services begin
 - Create multi-modal access
4. Capture (do not needlessly lose) revenue opportunities from footfall to 3rd parties
 - Configure station appropriately

Commercial and economic indirect benefits can occur outside the station boundary but will lag



Securing appropriate and sufficient land is a key tactic to deliver strategy and protect benefits

- ▶ To deliver station vision requires appropriate land assembly and/or participation of other land owners
- ▶ To capture value for benefit of HSR
 - directly own the land
 - have mechanisms that enable the capture of value increases from other owners
 - Value capture could be something other than cash/revenue benefit such as complementary investments or capital receipts or future revenue streams
- ▶ All the cases examined have been enabled by railroad (state) owned land
 - Most had existing connectivity and footfall
 - Legacy land issues appear to be common, e.g. contamination from previous uses
- ▶ In HSI ownership of land has migrated between public and private ownership and it's notable that the regeneration of the St Pancras/Kings Cross and Stratford areas outside the area are no longer part of the HSI railroad concession

Rome Tiburtina land assembly enabled the station to connect city districts



The challenge of sizing parking lots at Ebbsfleet

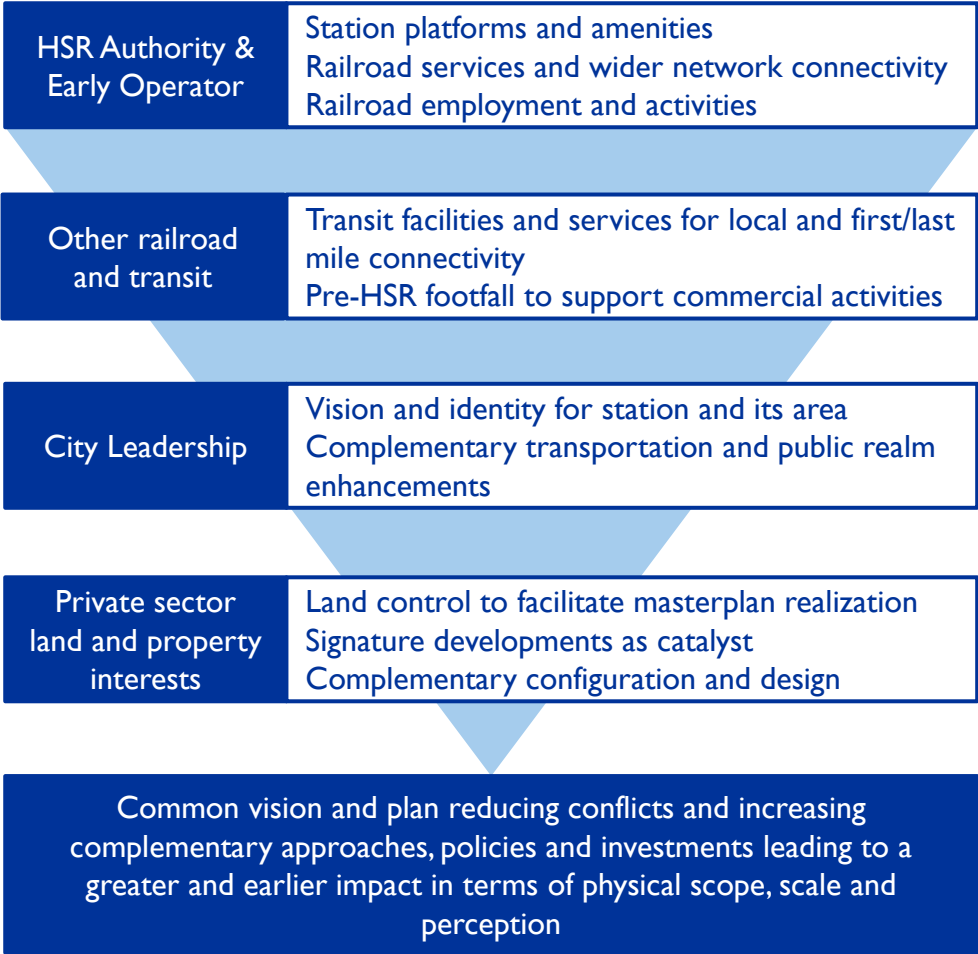
Careful design must be employed to create flexibility and cost efficient evolution of station and its role, functionality, etc.

- ▶ Waterloo International was known to be a temporary location
 - Architectural success has created a liability
 - Repurposing for rail services proved to be very expensive
 - Split of ownership has continued to cause commercial redeployment of passenger concourses to be delayed
- ▶ Stratford International's abandonment of international services to the north of the UK resulted in redundant platforms and concourse space
- ▶ Ebbsfleet International's significant car parking anecdotally remains under performing and perhaps expansion overtime would have optimised returns
- ▶ Bologna Centrale has commercially underperforming concourse with poor connectivity to rest of station and restrictions on retail activities due to approach to comply with sub-surface fire precautions
- ▶ Ashford International retail is poorly located for passing footfall and the HSR concession does not enjoy exclusive or the primary entrance to the station



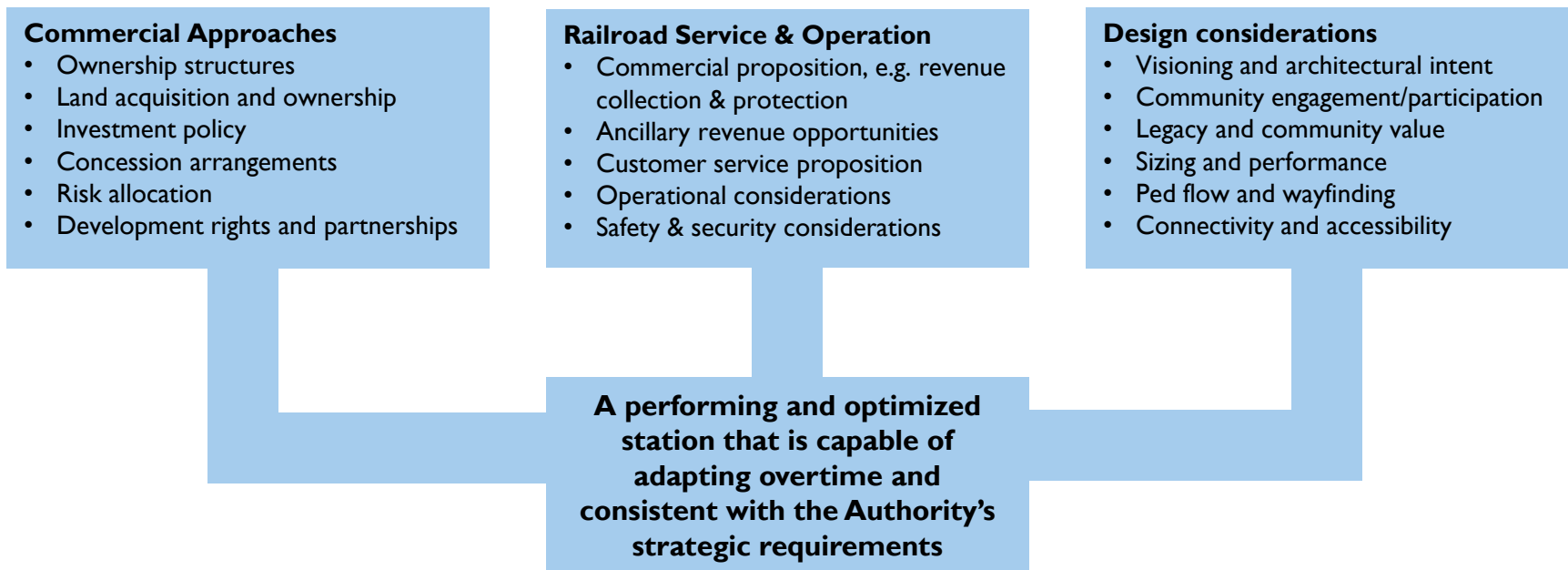
Success is most likely to come from strong leadership across a partnership of organizations at each station

- ▶ Dutch municipalities can influence policy and exert influence through existing contracts and investments made, but do not commercially participate in, or own the stations. They stand to gain from increased real estate taxes.
- ▶ Emilia-Romagna Region co-funded the development of the station as part of wider economic objectives
- ▶ European Union funded elements of the Italian system – perhaps similar role for Federal funds
- ▶ Private partners have been attracted to invest around the stations in the UK and Italian examples in particular



Match constrained resources to the scale of the opportunity and the capabilities required

- ▶ Time is required for stations to grow and gain status and support. Through tactical decision-making over the timeline of station area development, we seek to build up and optimize the ancillary revenues available and understand commercial propositions for each location
- ▶ Capability is required to ensure that path dependencies created by decision-making in the near-term do contemplate opportunities in the future and a range of plausible market outcomes in the station locations – station development is evidentially a ‘long-play’



Questions